

RECEIVED  
CENTRAL FAX CENTER**Merchant & Gould**  
An Intellectual Property Law Firm

FEB 04 2004

OFFICIAL

3200 IDS Center  
80 South Eighth Street  
Minneapolis, Minnesota  
55402-2215 USA  
TEL 612.332.5300  
FAX 612.332.9081  
www.merchant-  
gould.com

A Professional Corporation

Fax Transmission | February 4, 2004

TO: Commissioner for Patents  
Attn: Examiner GREEN  
Patent Examining Corps  
Facsimile Center  
Washington, D.C. 20231

FROM: Douglas P. Mueller

OUR REF: 10869.56US01  
TELEPHONE: 612.371.5237


Total pages, including cover letter: 14

PTO FAX NUMBER 1-703-872-9306

If you do NOT receive all of the pages, please telephone us at 612.336.4638, or fax us at 612.332.9081.

Title of OFFICIAL Document Transmitted: Revised claim listing of Amendment  
originally filed 11.19.03 to comply with  
formatting requirementsApplicant: LAMBORN et al.  
Serial No.: 10/004,486  
Filed: 10/31/01  
Group Art Unit: 1755  
Our Ref. No.: 10869.56US01

Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers, if appropriate.

By:   
Name: Douglas P. Mueller  
Reg. No.: 30,300

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office on the date shown below.

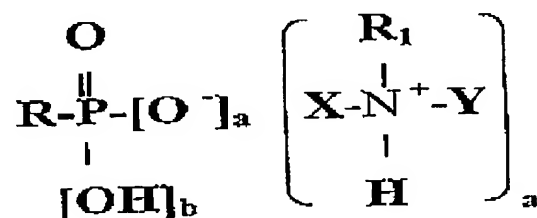
  
Sender's Name: Gina M. DahlFebruary 4, 2004  
Date

## In the Claims

The following claim listing replaces previous listings of claims. Claims 22 and 72 are canceled without prejudice or disclaimer.

1. (Currently Amended) A method of treating metal pigment particles for inhibiting their reaction with water, comprising:

contacting a composition comprising metal pigment particles with a salt having the following formula



wherein a ranges from 0.25 to 2.0,

b ranges from 0.0 to 1.75, and  $a + b = 2.0$ ,

R is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl and comprises at least 6 carbon atoms;

R<sub>1</sub> comprises at least six carbon atoms and is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and and [[or]] alkylaryl; and

X and Y are each independently either hydrogen or a moiety having from 1 to 20 carbon atoms selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl.

2. (original) The method according to claim 1, wherein R further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

3. (Currently Amended) The method according to claim 1, wherein at least one of X and Y is the moiety having from 1 to 20 carbon atoms and further comprises each independently

have at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

4. (original) The method according to claim 1, wherein  $R_1$  comprises at least eight carbon atoms.

5. (Currently Amended) The method according to claim 1, wherein  $R_1$  further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

6. (original) The method according to claim 1, wherein  $a$  ranges from 1.0 to 2.0.

7. (original) The method according to claim 1, wherein  $b$  ranges from 0.0 to 1.0.

8. (Currently Amended) The method according to claim 1, wherein the salt compound is added neat.

9. (Currently Amended) The method according to claim 1, wherein the salt compound is added as a solution, the solution comprising the salt compound and a solvent that is miscible with water.

10. (Currently Amended) The method according to claim 1, wherein the metal pigment particles are aluminum, zinc, or bronze particles.

11. (Currently Amended) The method according to claim 10, wherein the metal pigment particles are aluminum.

12. (Currently Amended) The method according to claim 1, wherein the metal pigment particles have a particle size ranging from 1 to 500 microns.

13. (Currently Amended) The method according to claim 1, wherein the metal pigment particles have a particle size ranging from 5 to 100 microns.

14. (Currently Amended) The method according to claim 1, wherein the metal pigment particles are in flake form.

15. (Currently Amended) The method according to claim 1, wherein the metal pigment particles are in a paste comprising 55 to 95% by weight metal particles.

16. (Currently Amended) The method according to claim 15, wherein the paste comprises 60 to 85% by weight metal pigment particles.

17. (Currently Amended) The method according to claim 1, wherein the metal particles are in a slurry comprising 1 to 40% by weight metal pigment particles.

18. (Currently Amended) The method according to claim 17, wherein the slurry comprises 10 to 30% by weight metal pigment particles.

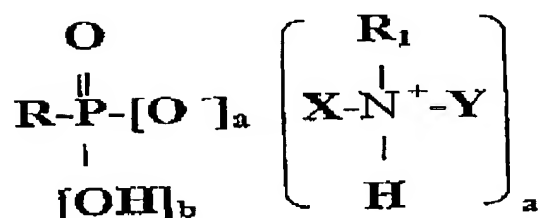
19. (Currently Amended) The method according to claim 1, wherein the amount of salt added ranges from 0.5 to 30% with respect to the weight of the metal pigment particles.

20. (Currently Amended) The method according to claim 1, wherein the amount of salt added ranges from 1 to 15% with respect to the weight of the metal pigment particles.

21. (Currently Amended) The method according to claim 1, wherein the salt and the metal pigment particles are agitated at a temperature ranging from 0 to 100 °C.

22. canceled

23. (Currently Amended) A method of method of making a coating composition, comprising adding metal pigment particles and a salt having the following formula to an aqueous coating composition carrier



wherein a ranges from 0.25 to 2.0,

b ranges from 0.0 to 1.75, and  $a + b = 2.0$ ,

R is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl and comprises at least 6 carbon atoms;

R<sub>1</sub> comprises at least six carbon atoms and is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and [[or]] alkylaryl; and

X and Y are each independently either hydrogen or a moiety having from 1 to 20 carbon atoms selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl.

24. (original) The method according to claim 23, wherein R further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

25. (Currently Amended) The method according to claim 23, wherein at least one of X and Y is the moiety having from 1 to 20 carbon atoms and further comprises each ~~independently comprise~~ at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

26. (original) The method according to claim 23, wherein a ranges from 1.0 to 2.0.

27. (original) The method according to claim 23, wherein b ranges from 0.0 to 1.0.

28. (original) The method according to claim 23, wherein  $R_1$  comprises at least eight carbon atoms.

29. (Currently Amended) The method according to claim 23, wherein  $R_1$  further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

30. (original) The method according to claim 23, wherein the salt is added first.

31. (Currently Amended) The method according to claim 23, wherein the salt is added after the metal pigment particles are added.

32. (Currently Amended) The method according to claim 31, wherein the salt is added within 30 minutes of contacting the metal pigment particles with water contained in any component of the coating composition.

33. (Currently Amended) The method according to claim 23, wherein the metal pigment particles are aluminum, zinc, or bronze particles.

34. (Currently Amended) The method according to claim 33, wherein the metal pigment particles are aluminum.

35. (Currently Amended) The method according to claim 23, wherein the metal pigment particles have a particle size ranging from 1 to 500 microns.

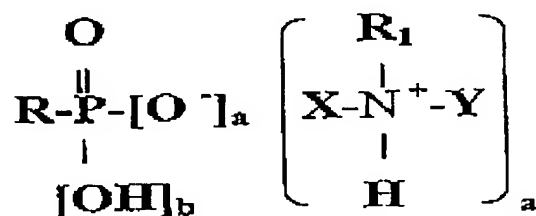
36. (Currently Amended) The method according to claim 23, wherein the metal pigment particles have a particle size ranging from 5 to 100 microns.

37. (Currently Amended) The method according to claim 23, wherein the metal pigment particles are spherical or are in flake form.

38. (Currently Amended) The method according to claim 23, wherein the amount of salt added ranges from 0.5 to 30% with respect to the weight of the metal pigment particles.

39. (Currently Amended) The method according to claim 23, wherein the amount of salt added ranges from 1 to 15% with respect to the weight of the metal pigment particles.

40. (Currently Amended) A method of treating metal pigment particles for inhibiting their reaction with water, comprising milling the particles with a salt having the following formula dissolved in a lubricant



wherein a ranges from 0.25 to 2.0,

b ranges from 0.0 to 1.75, and  $a + b = 2.0$ ,

R is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl and comprises at least 6 carbon atoms;

R<sub>1</sub> comprises at least six carbon atoms and is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and [[or]] alkylaryl; and

X and Y are each independently either hydrogen or a moiety having from 1 to 20 carbon atoms selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl.

41. (original) The method according to claim 40, wherein R further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

42. (Currently Amended) The method according to claim 40, wherein at least one of X and Y is the moiety having from 1 to 20 carbon atoms and further comprises each independently

comprise at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

43. (original) The method according to claim 40, wherein a ranges from 1.0 to 2.0.

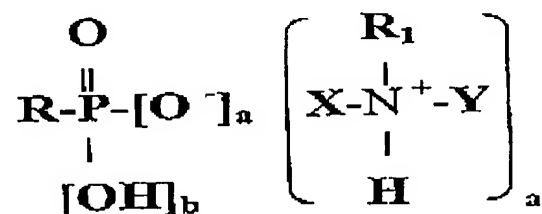
44. (original) The method according to claim 40, wherein b ranges from 0.0 to 1.0.

45. (original) The method according to claim 40, wherein R<sub>1</sub> comprises at least eight carbon atoms.

46. (Currently Amended) The method according to claim 40, wherein R<sub>1</sub> further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

47. (Currently Amended) A coating composition comprising:

a) metal pigment particles treated with a salt having the following formula for inhibiting their reaction with water



wherein a ranges from 0.25 to 2.0,

b ranges from 0.0 to 1.75, and a + b = 2.0,

R is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl and comprises at least 6 carbon atoms;

R<sub>1</sub> comprises at least six carbon atoms and is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and [[or]] alkylaryl; and



X and Y are each independently either hydrogen or a moiety having from 1 to 20 carbon atoms selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl; and  
b) a carrier.

48. (original) The coating composition according to claim 47, wherein R further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

49. (Currently Amended) The coating composition according to claim 47, wherein at least one of X and Y is the moiety having from 1 to 20 carbon atoms and further comprises each ~~independently have~~ at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

50. (original) The coating composition according to claim 47, wherein a ranges from 1.0 to 2.0.

51. (original) The coating composition according to claim 47, wherein b ranges from 0.0 to 1.0.

52. (original) The coating composition according to claim 47, wherein R<sub>1</sub> comprises at least eight carbon atoms.

53. (Currently Amended) The coating composition according to claim 47, wherein R<sub>1</sub> further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

54. (Currently Amended) The coating composition according to claim 47, wherein the metal pigment particles are aluminum, zinc, or bronze particles.

55. (Currently Amended) The coating composition according to claim 54, wherein the metal pigment particles are aluminum.

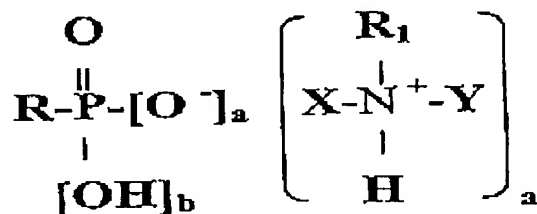
56. (Currently Amended) The coating composition according to claim 47, wherein the metal pigment particles have a particle size ranging from 1 to 500 microns.

57. (Currently Amended) The coating composition according to claim 47, wherein the metal pigment particles have a particle size ranging from 5 to 100 microns.

58. (Currently Amended) The coating composition according to claim 47, wherein the metal pigment particles are spherical or are in flake form.

59. (Currently Amended) A metallic paste comprising:

[[a]] metal pigment particles treated with a salt having the following formula to inhibit their reaction with water



wherein a ranges from 0.25 to 2.0,

b ranges from 0.0 to 1.75, and  $a + b = 2.0$ ,

R is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl and comprises at least 6 carbon atoms;

R<sub>1</sub> comprises at least six carbon atoms and is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and [[or]] alkylaryl; and

X and Y are each independently either hydrogen or a moiety having from 1 to 20 carbon atoms selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl; and

[[b)]] a liquid for forming the paste.

60. (original) The metallic paste according to claim 59, wherein R further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

61. (Currently Amended) The metallic paste according to claim 59, wherein at least one of X and Y is the moiety having from 1 to 20 carbon atoms and further comprises each independently comprise at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

62. (original) The metallic paste according to claim 59, wherein a ranges from 1.0 to 2.0.

63. (original) The metallic paste according to claim 59, wherein b ranges from 0.0 to 1.0.

64. (Currently Amended) The metallic paste ~~method~~ according to claim 59, wherein R<sub>1</sub> comprises at least eight carbon atoms.

65. (Currently Amended) The metallic paste ~~method~~ according to claim 59, wherein R<sub>1</sub> further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

66. (Currently Amended) The metallic paste according to claim 59, wherein the metal pigment particles are aluminum, zinc, or bronze particles.

67. (Currently Amended) The metallic paste according to claim 66, wherein the metal pigment particles are aluminum.

68. (Currently Amended) The metallic paste according to claim 59, wherein the metal pigment particles have a particle size ranging from 1 to 500 microns.

69. (Currently Amended) The metallic paste according to claim 59, wherein the metal pigment particles have a particle size ranging from 5 to 100 microns.

70. (Currently Amended) The metallic paste according to claim 59, wherein the metal pigment particles are spherical or are in flake form.

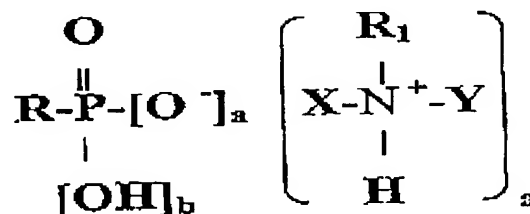
71. (original) A method of making a coating composition, comprising mixing the paste of claim 59 with a carrier to form the coating composition.

72. canceled

73. (Currently Amended) An automobile comprising a metal surface coated with the coating composition according to claim 47.

74. (Currently Amended) A metal pigment particle dispersion for forming metal pigment particle-containing coating compositions, comprising:

a) metal pigment particles treated with a salt having the following formula to inhibit their reaction with water



wherein a ranges from 0.25 to 2.0,

b ranges from 0.0 to 1.75, and  $a + b = 2.0$ ,

R is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl and comprises at least 6 carbon atoms;

R<sub>1</sub> comprises at least six carbon atoms and is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, ~~[[or]]~~ and alkylaryl, and

X and Y are each independently either hydrogen or a moiety having from 1 to 20 carbon atoms selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl, and

b) a dispersion carrier for the metal pigment particles, the dispersion carrier being liquid at room temperature and compatible with a vehicle for forming a coating composition

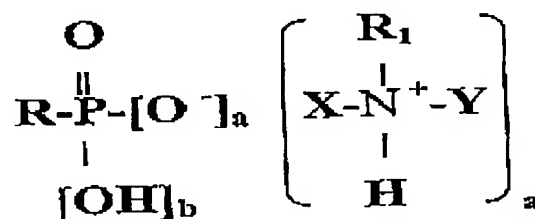
wherein, the metal pigment particles are capable of remaining in a dispersed state in the dispersion substantially without separation.

75. (original) The dispersion according to claim 74, wherein R further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

76. (Currently Amended) The dispersion according to claim 74, wherein at least one of X and Y is the moiety having from 1 to 20 carbon atoms and further comprises each ~~independently have~~ at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

77. (Currently Amended) A method of making a metal pigment particle dispersion for forming a metal pigment particle containing coating composition, comprising:

mixing a composition comprising metal pigment particles treated with a salt having the following formula to inhibit their reaction with water with a dispersion carrier, the dispersion carrier being liquid at room temperature and compatible with a vehicle for forming a coating composition



wherein a ranges from 0.25 to 2.0,

b ranges from 0.0 to 1.75, and  $a + b = 2.0$ ,

R is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl and comprises at least 6 carbon atoms;

R<sub>1</sub> comprises at least six carbon atoms and is selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and [[or]] alkylaryl, and

X and Y are each independently either hydrogen or a moiety having from 1 to 20 carbon atoms selected from the group consisting of alkyl, alkenyl, alkynyl, aryl, and alkylaryl.

78. (original) The method according to claim 77, wherein R further comprises at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.

79. (Currently Amended) The method according to claim 77, wherein at least one of X and Y is the moiety having from 1 to 20 carbon atoms and further comprises each independently have at least one functional group selected from the group consisting of hydroxyl, carbonyl, carboxyl, epoxy, ether, amino, nitro, nitrile, thio, silyl, sulfo, phosphato and halo.